

**DRAFT**

# US 29 North Corridor Advisory Committee Meeting #8

## Montgomery County **RAPID TRANSIT**

*US 29*

East County Regional Services Center  
Silver Spring, Maryland  
September 22, 2016  
6:30 p.m. to 9:00 p.m.



Maryland Department  
of Transportation

**MC DOT**  
Montgomery County Department of Transportation

# Welcome

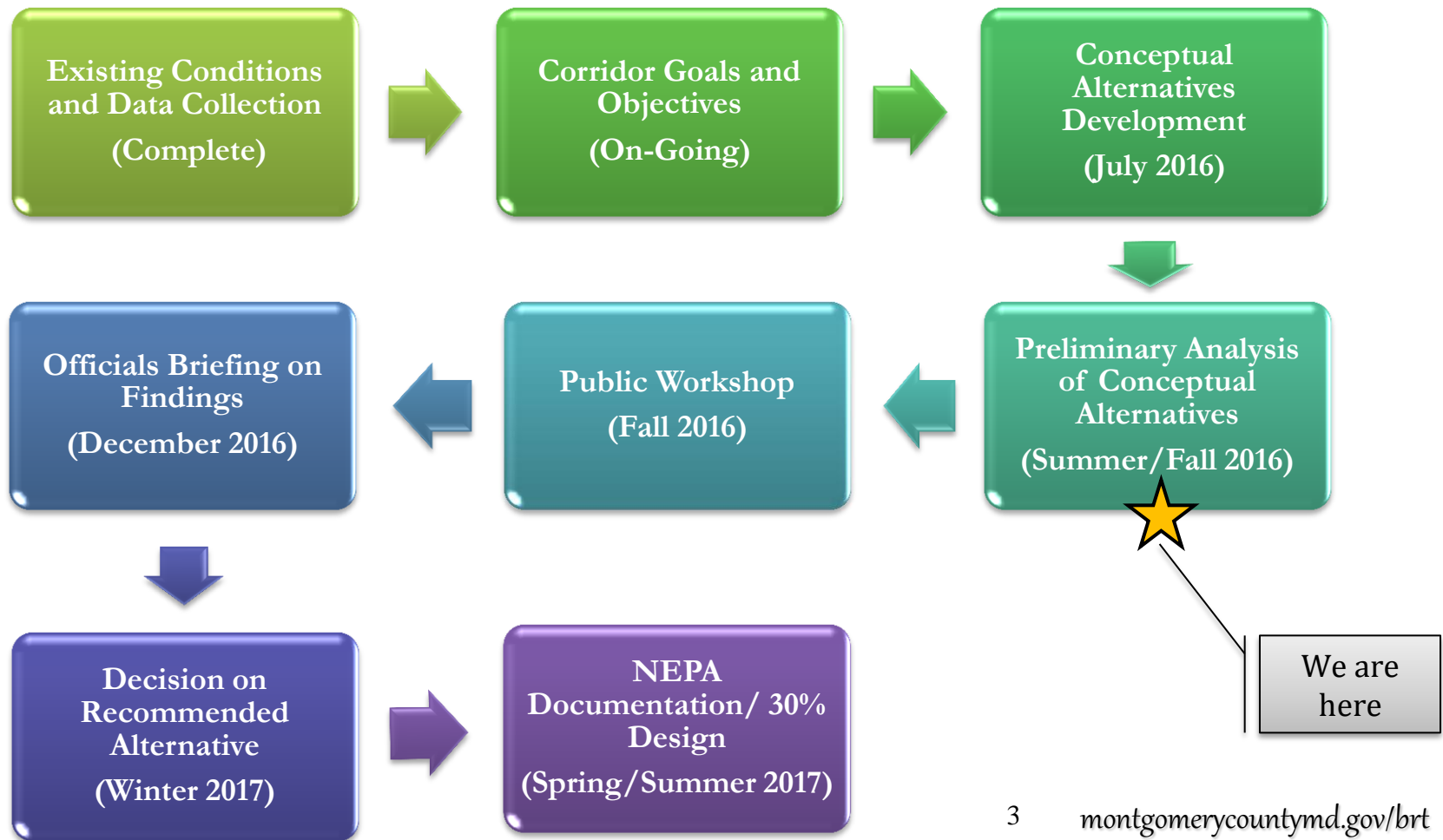
---

## Agenda:

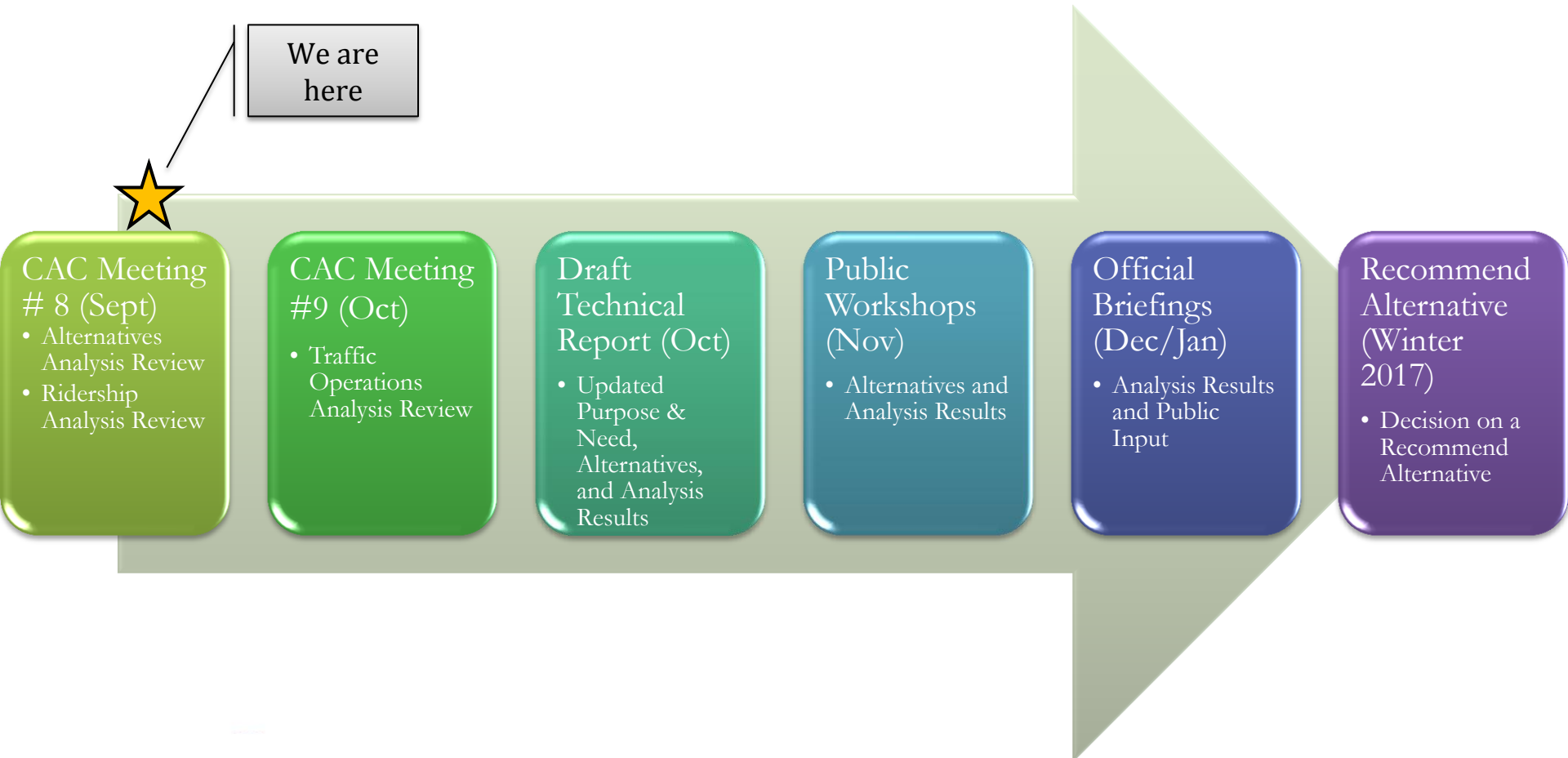
- Welcome & Meeting Overview
- Progress Update & Upcoming Milestones
- Alternatives Analysis Review
  - Alternative A
  - Alternative B
- Ridership Analysis Review
  - Ridership Data Comparison
- Tabletop Discussion

**Note: Opportunities for question and answer sessions will be provided at appropriate breaks in the presentation. Please hold questions and comments until specified.**

# Progress Update



## Upcoming Project Milestones



## Selection Criteria

Items highlighted in **orange** will be discussed tonight



# Objectives for Meetings 8 & 9

---

Questions we hope to address with these meetings:

- **What are the potential physical impacts?**
- **What is the anticipated transit ridership?**
- What are the potential effects on traffic operations?
  - Which alternative operates better north of Stewart Lane?
  - Which alternative operates better south of Stewart Lane?
  - What options might there be to mitigate issues identified in the analysis?
  - What does this mean for the recommended alternative?



Meeting 8

# Questions?

---

## Agenda:

- ✓ **Welcome & Meeting Overview**
- ✓ **Progress Update & Upcoming Milestones**
- Alternatives Analysis Review
  - Alternative A
  - Alternative B
- Ridership Analysis Review
  - Ridership Data Comparison
- Tabletop Discussion





# Alternatives Review

---

## Alternatives Under Consideration:

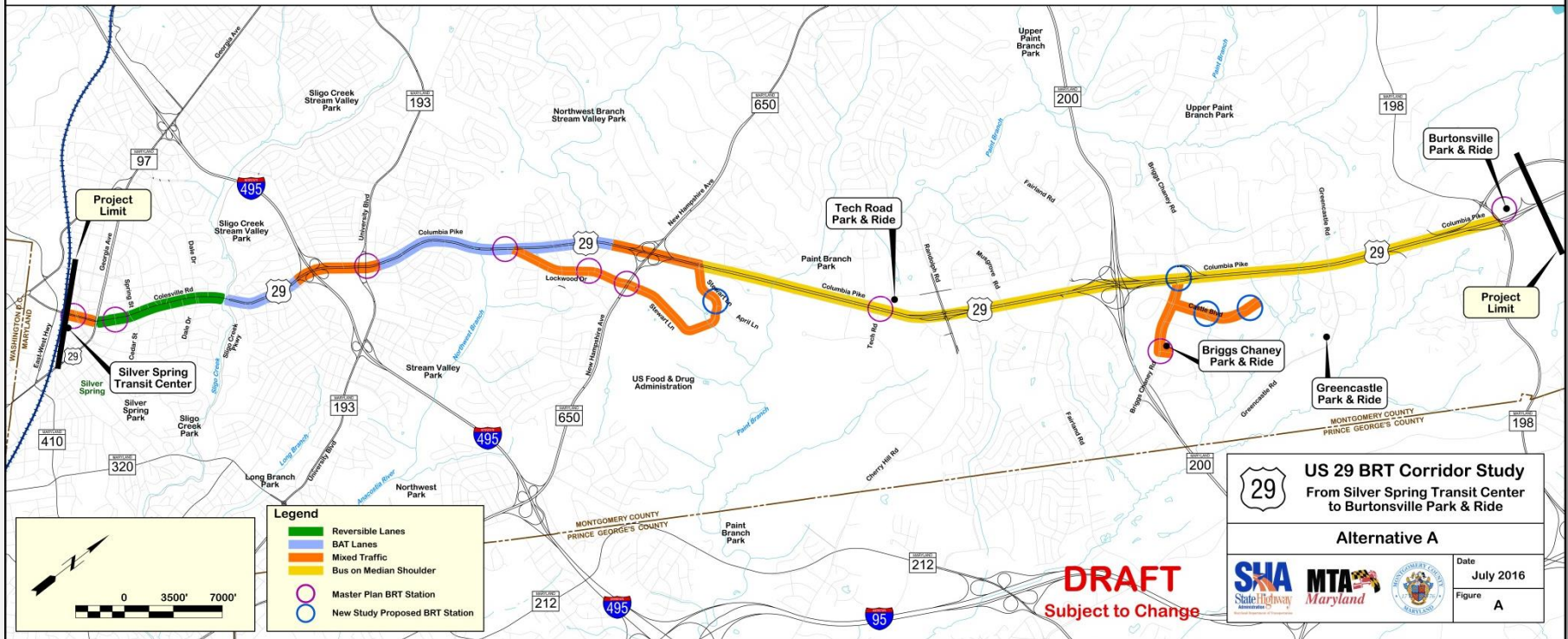
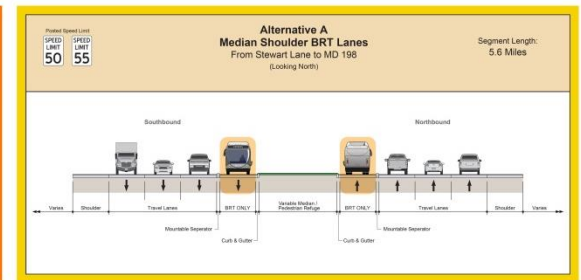
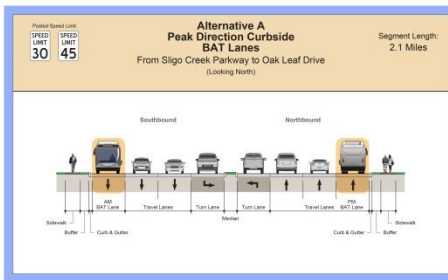
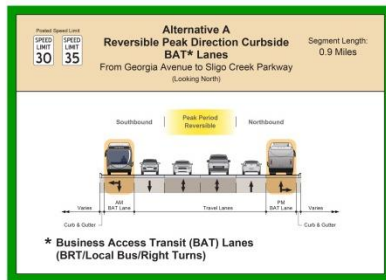
- **No-Build Alternative – for comparison purposes**
- **Alternative A:**
  - Curbside Business Access Transit Lanes (aka, Bus And Turn Lanes or BAT Lanes)\* in South
  - Median Shoulder BRT Lanes in North
- **Alternative B:**
  - Curbside Managed Lanes (HOV2+/BAT)\*\* in South
  - Bus on Outside Shoulder in North

**\*BAT Lanes = BRT buses, local buses, right turning traffic**

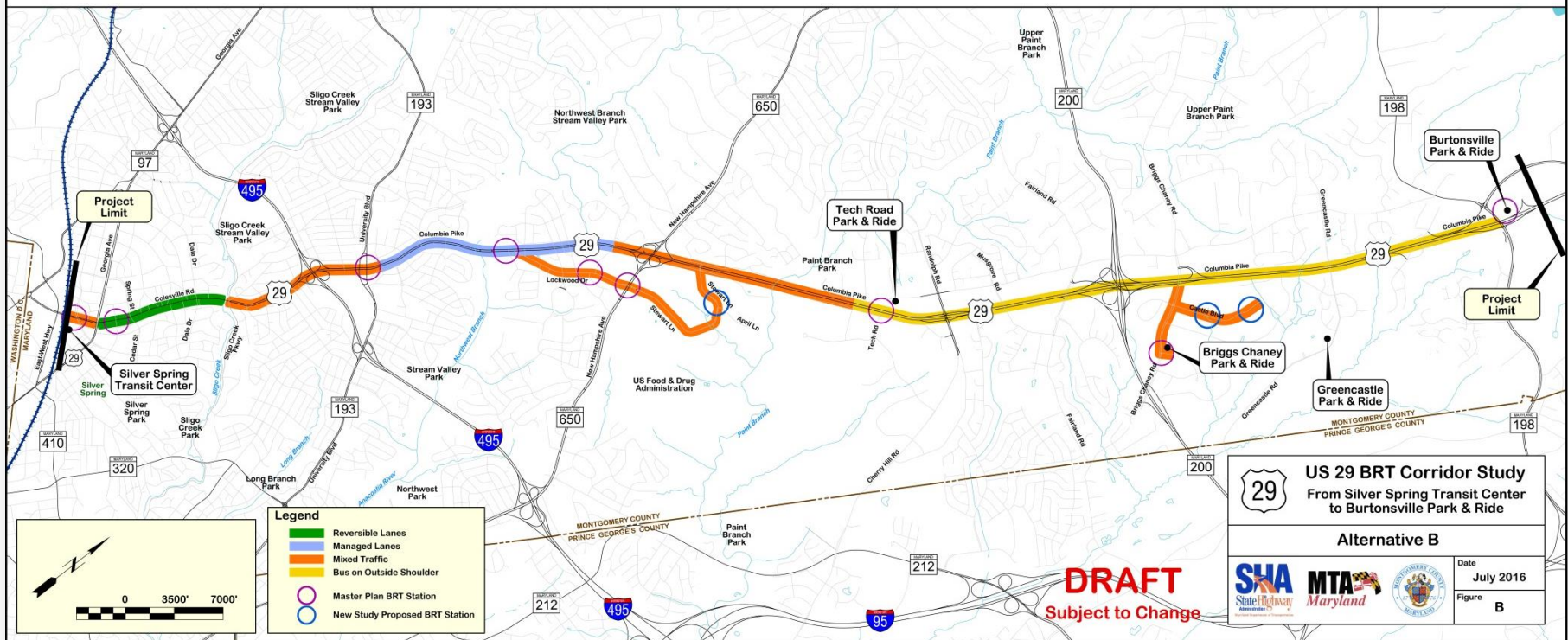
**\*\*Managed Lanes (HOV2+/BAT) = Vehicles with 2 or more persons, BRT buses, local buses, right turning traffic**



## Alternative A



## Alternative B



# Alternatives Analysis Review

---

## Elements Analyzed\*:

- Range of Potential Impacts to Natural Resources
- Range of Potential Impacts to Socioeconomic and Cultural Resources
- Range of Potential Impacts to Properties

\*Preliminary planning-level results from the analyses are presented as approximated ranges.

# Alternatives Analysis Review

## Range of Potential Impacts to Natural Resources:

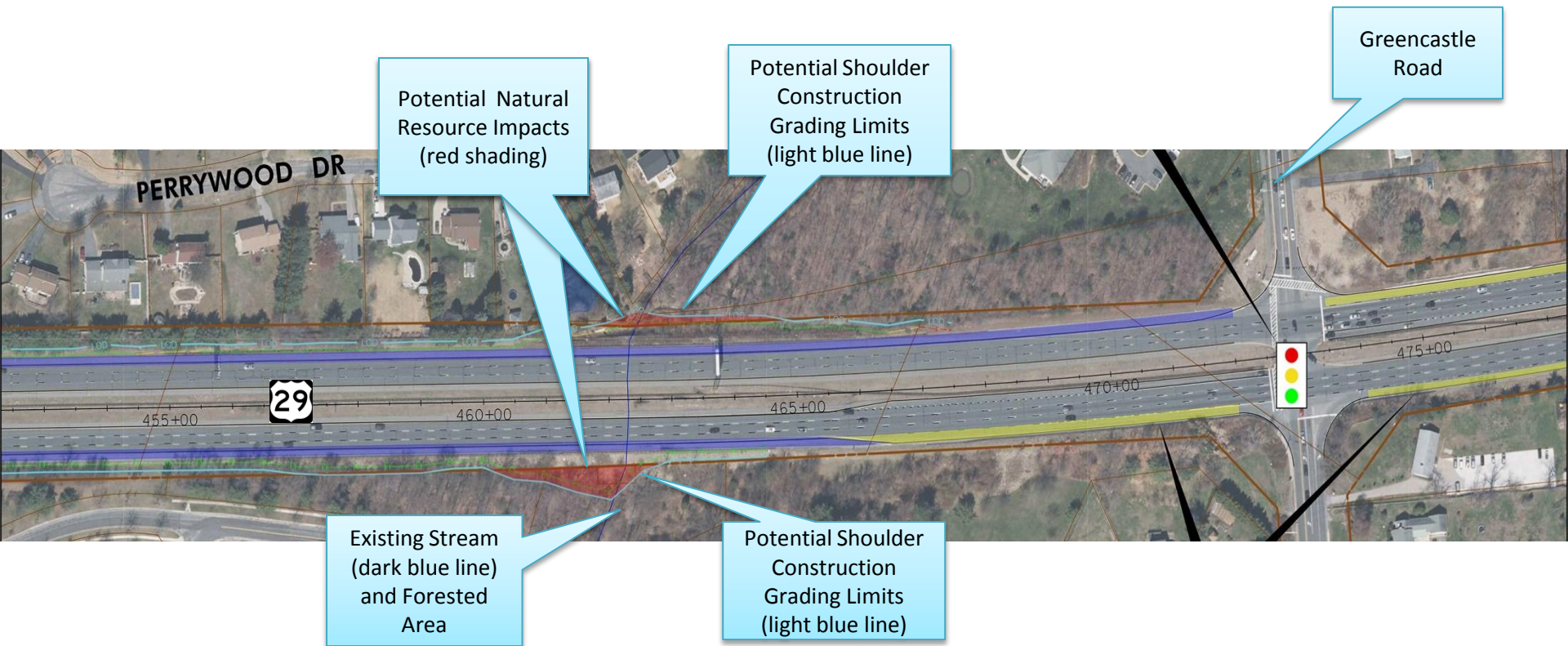
	Wetlands (acres)	Streams (linear feet)	Forested Areas (acres)	Floodplains (acres)	New Impervious Surface (acres)
Alt. A	0.0 - 0.2	0 - 20	1.0 - 3.0	0.0 - 0.5	8 - 10
Alt. B	0.0 - 0.2	0 - 125	2.0 - 5.0	0.0 - 1.0	2 - 4

- Alternative B has potentially more impact associated with potential shoulder reconstruction.



## Alternative B

### Example of Potential Impacts to Natural Resources



# Alternatives Analysis Review

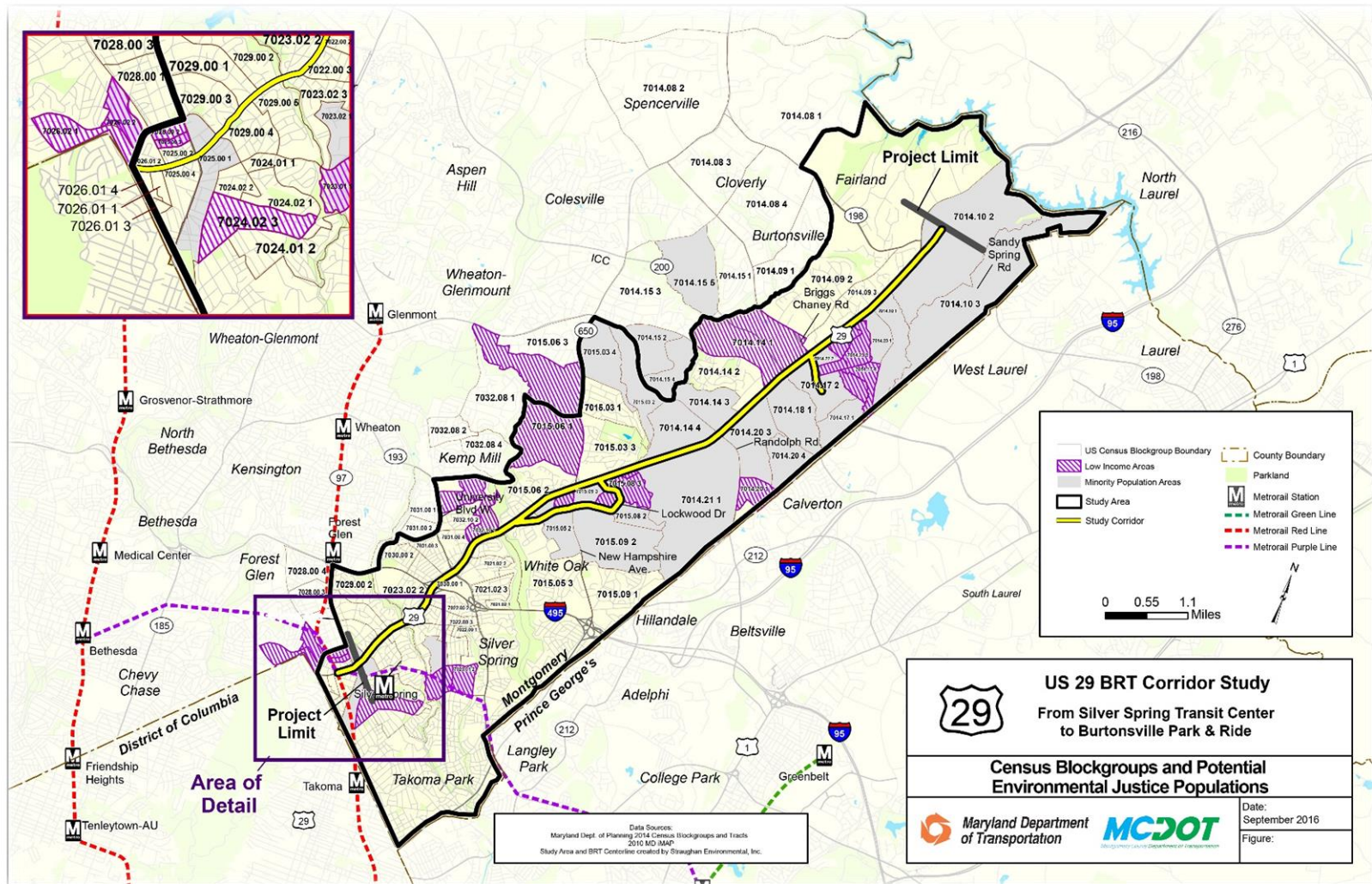
Range of Potential Impacts to Socioeconomic and Cultural Resources:

	Environmental Justice Communities (acres)	Parks (acres)	Historic Properties (acres)
Alt. A	0.2 - 0.5	0.0 - 0.2	0.0 - 0.1
Alt. B	0.5 - 1.0	0.0 - 0.2	0.0 - 0.1

- Neither alternative is anticipated to have significant impacts.
- Alternative B has potentially more impacts associated with potential shoulder reconstruction.



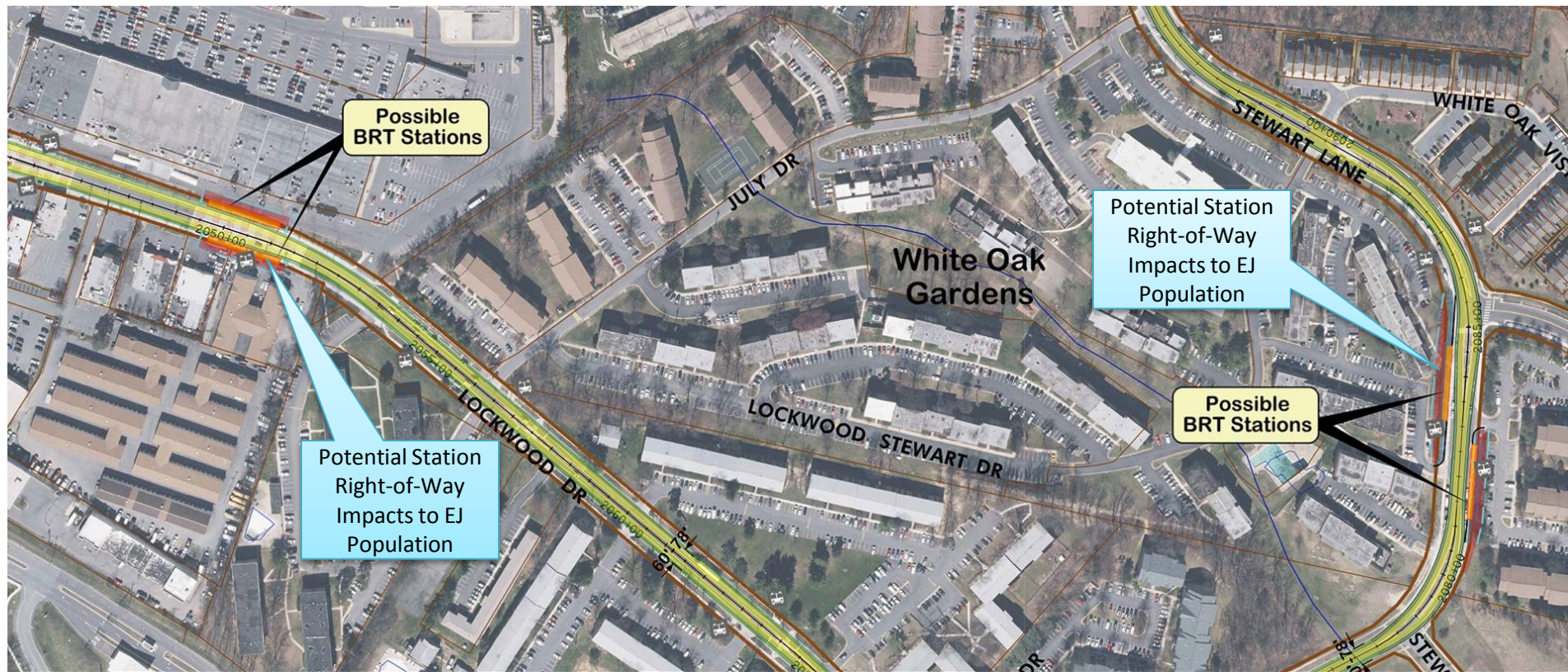
# Environmental Justice Populations





# Alternatives A and B

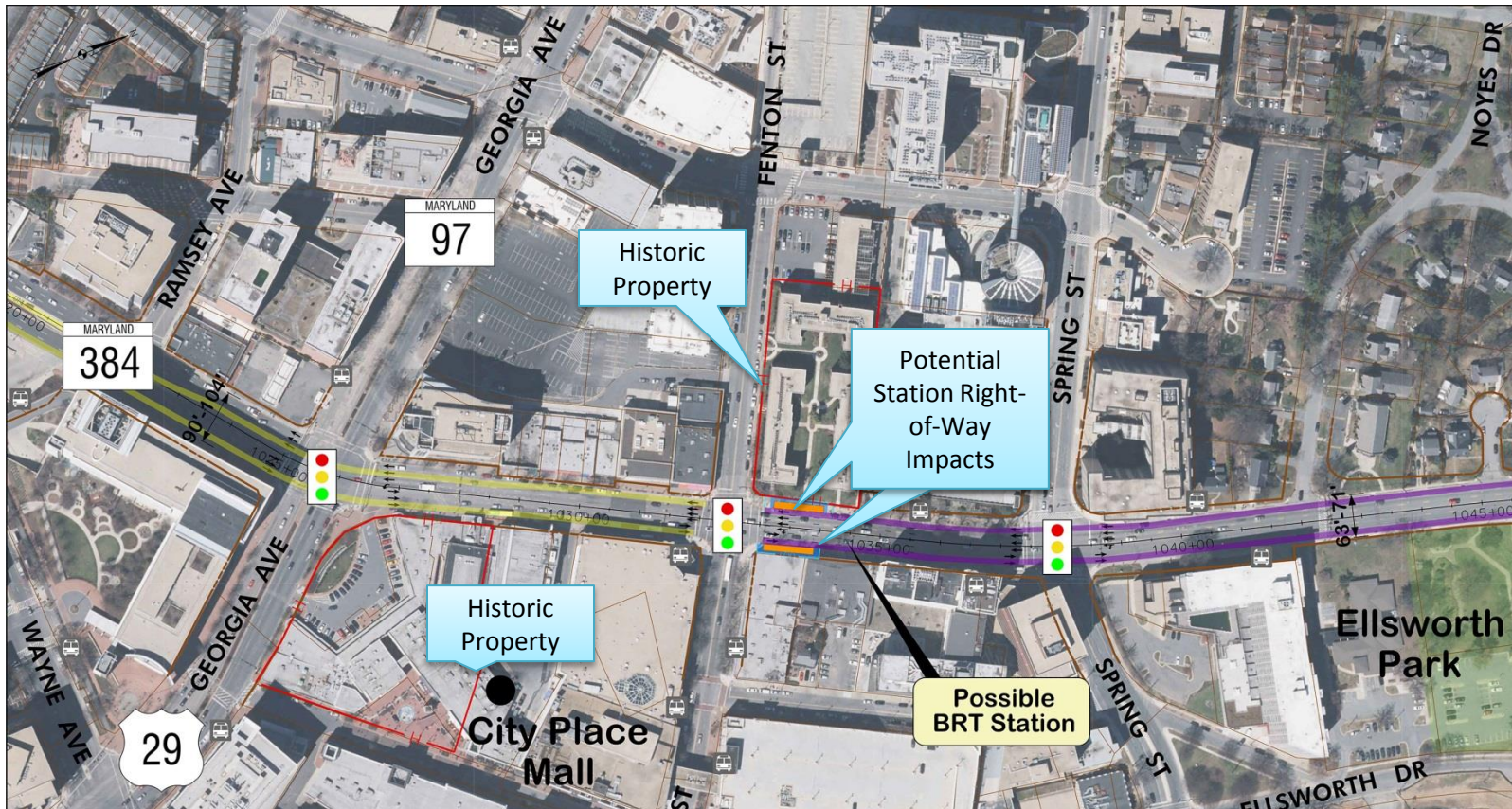
## Example of Potential Impacts to Environmental Justice Populations





# Alternative A

## Example of Potential Impacts to Historic Property



# Alternatives Analysis Review

---

## Range of Potential Impacts to Properties:

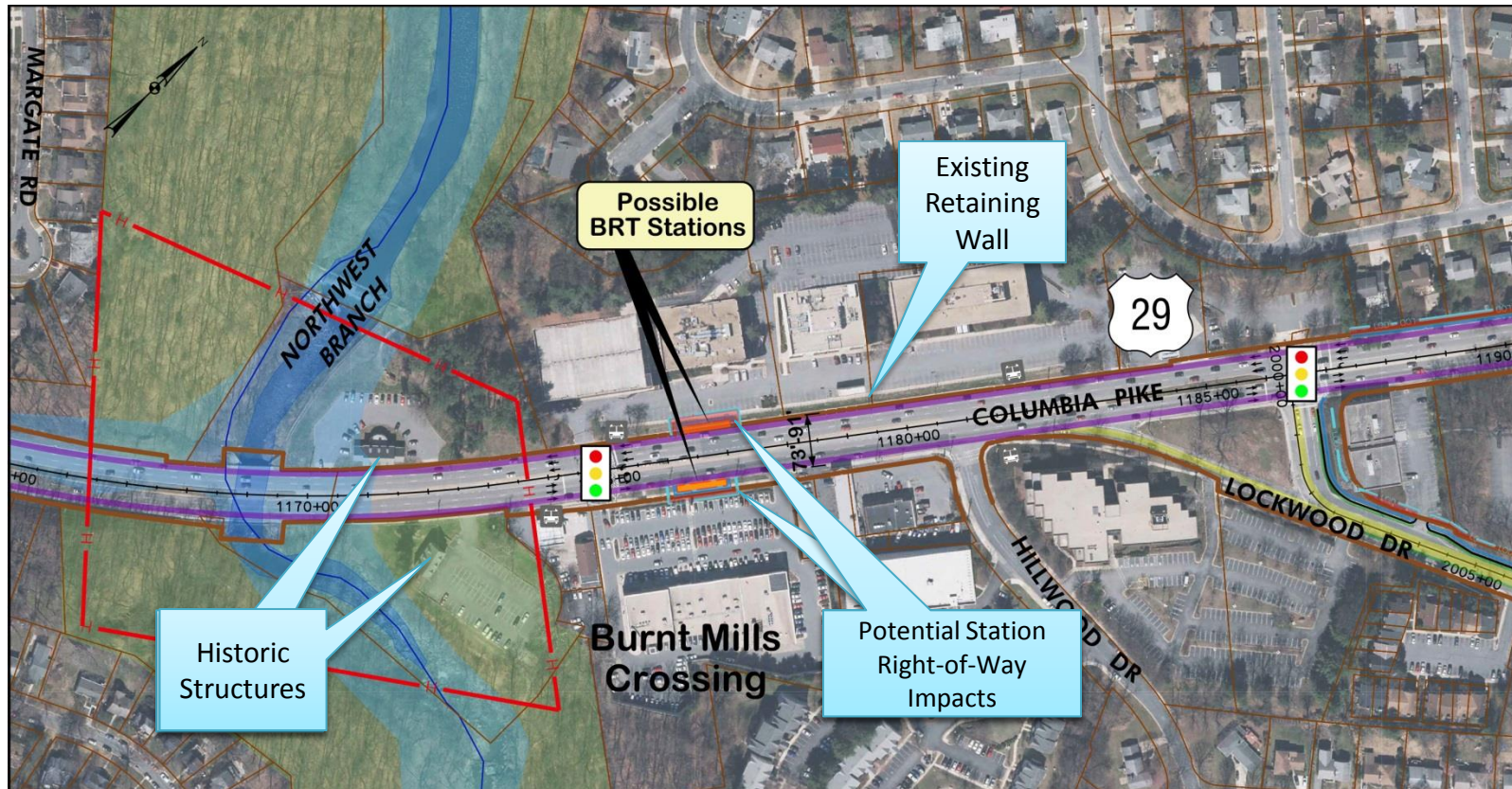
	Right-of-Way (acres)	Residential Properties (number)	Commercial Properties (number)
Alt. A	2.0 - 4.0	5 - 15	0 - 5
Alt. B	3.0 - 6.0	15 - 20	5 - 10

- There are no property displacements anticipated.
- Alternative B has potentially more impact associated with potential shoulder reconstruction.



# Alternative A

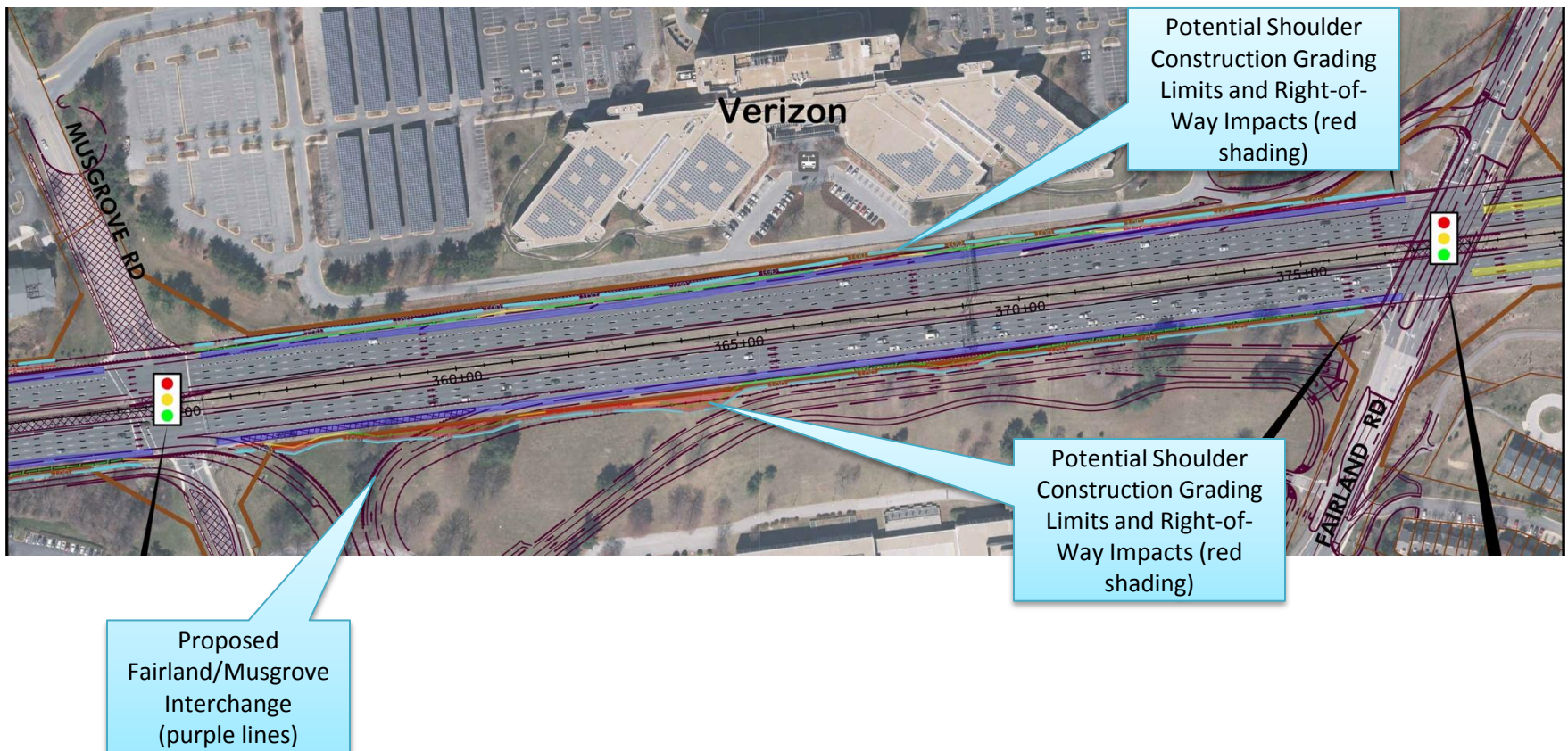
## Example of Potential Right-of-Way Impacts to Property





## Alternative B

### Example of Potential Right-of-Way Impacts to Property



# Questions?

---

## Agenda:

- ✓ **Welcome & Meeting Overview**
- ✓ **Progress Update & Upcoming Milestones**
- ✓ **Alternatives Analysis Review**
  - ✓ **Alternative A**
  - ✓ **Alternative B**
- **Ridership Analysis Review**
  - **Ridership Data Comparison**
- **Tabletop Discussion**



# Ridership Analysis Review

---

## Topics:

- Regional Demand Model
- BRT Assumptions
- Changes to Existing Bus Transit Network
- Results: 2040 Forecasted Peak Period Boardings
- Results: 2040 Forecasted Daily Boardings
- Results: Accessibility and Mode Share
- Ridership Project Goals



# Ridership Analysis Review: Ridership Demand Model

---

- Same Regional Demand Model as the Purpose and Need: TPB/MWCOG regional travel demand model version 2.3.57 with model validation and refinements from 2015
- Same Study Area as the Purpose and Need

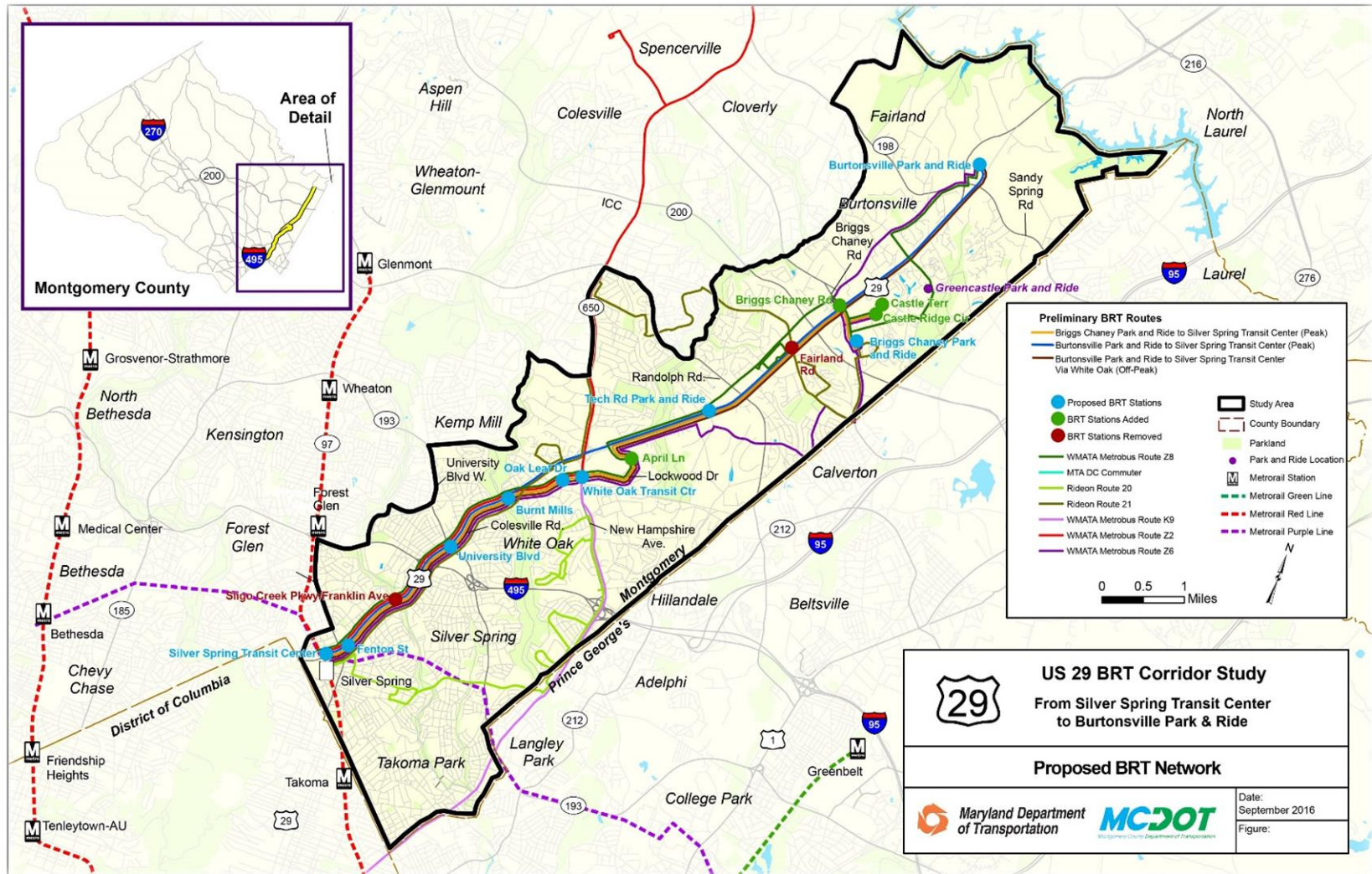
**Results are meant to be comparable to the No-Build so the project team can compare alternatives.**

# Ridership Analysis Review: BRT Assumptions

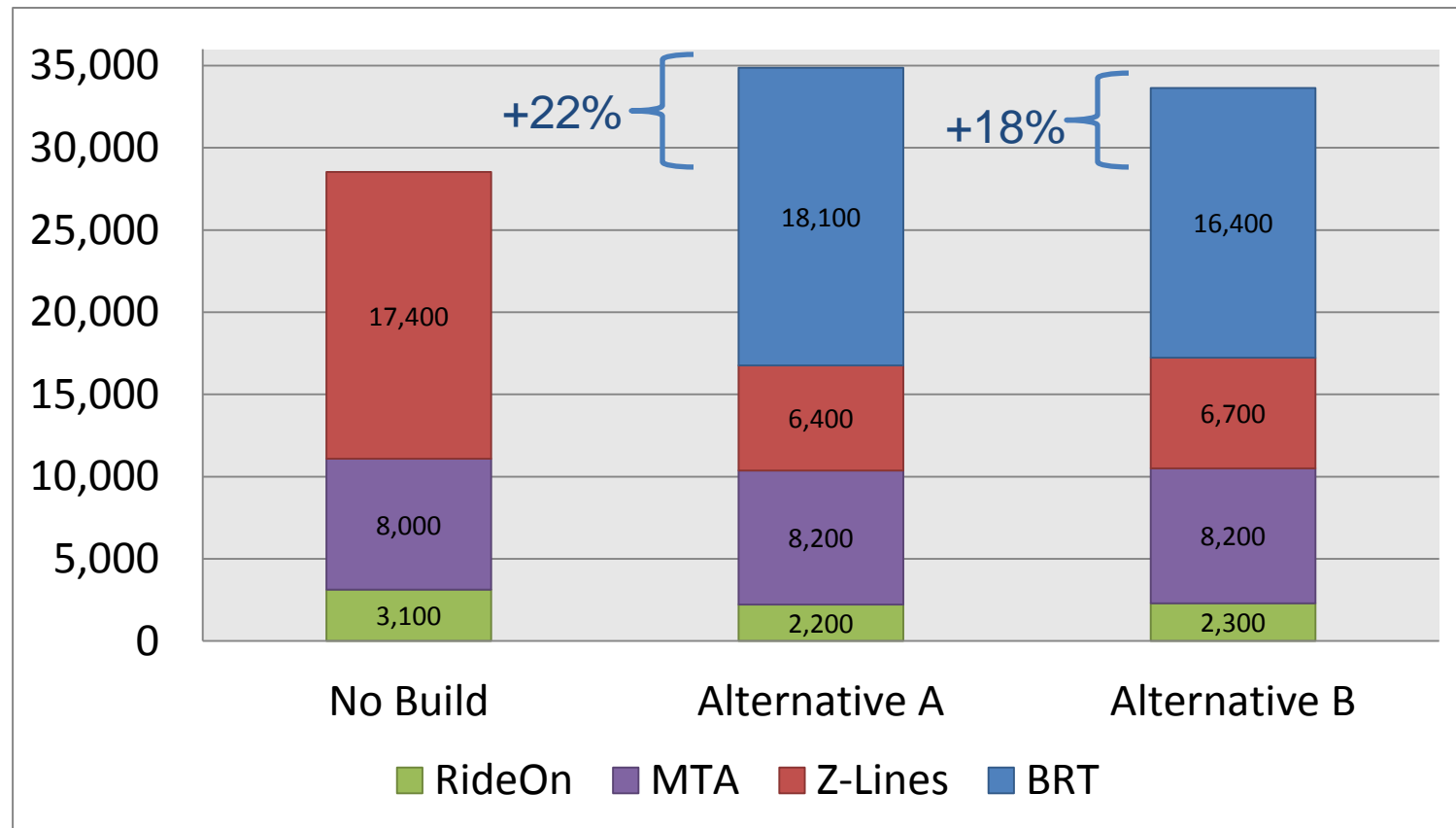
---

- Headways: 6 minute during peak and 10 minute off-peak
- Three BRT route patterns identified
  - 6 stops along mainline US 29 (Peak)
  - 11 stops along mainline US 29 with divergence to Lockwood (Peak)
  - 9 stops along mainline US 29 (Off-peak)

# BRT Operations Plan & Routes



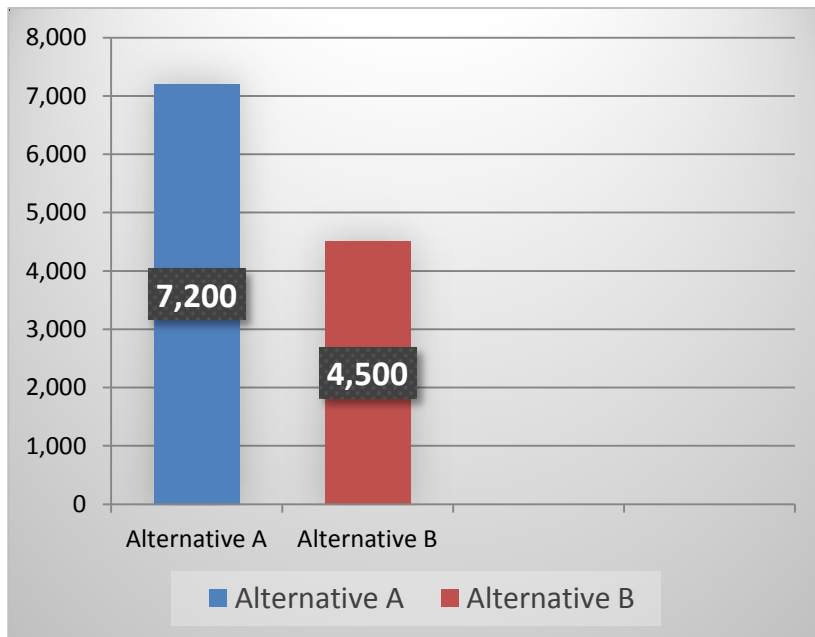
# Ridership Analysis Review: 2040 Daily Boardings



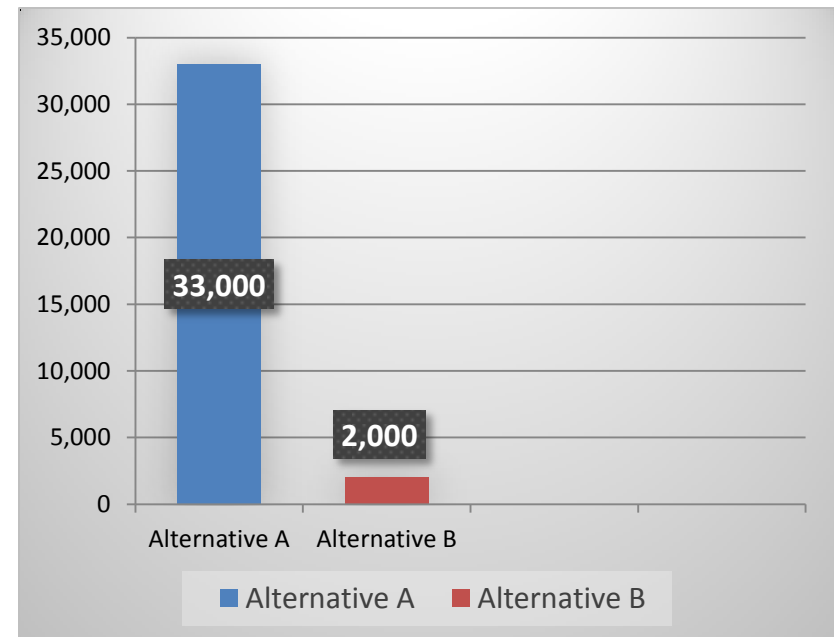
- Alt. B ridership affected by slightly slower travel speeds

# Ridership Analysis Review: 2040 Employment Accessibility

Jobs within 45 minutes via Transit  
(Increase over No-Build)



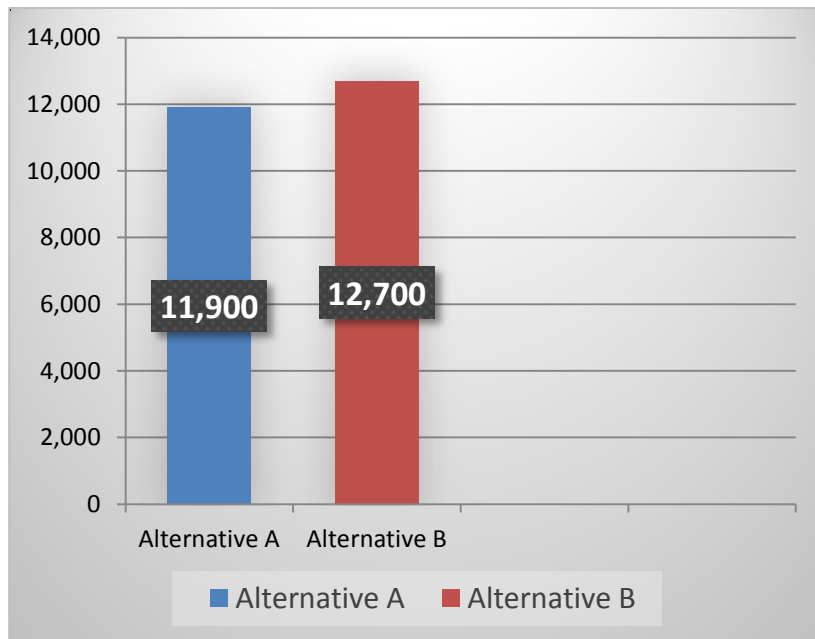
Jobs within 60 minutes via Transit  
(Increase over No-Build)



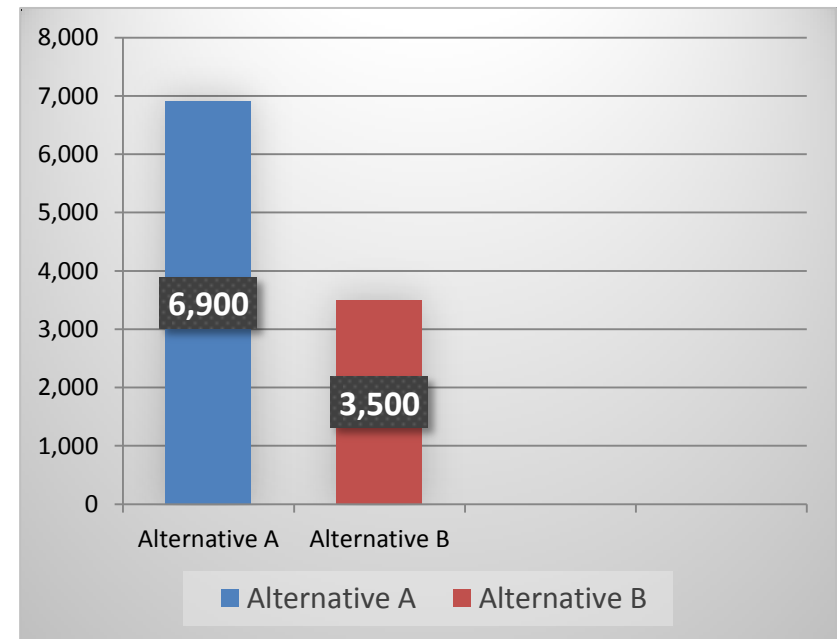
- Both alternatives increase transit accessibility over the No-Build
- Alternative A has nominally higher numbers due to differences in coverage and run time.

# Ridership Analysis Review: 2040 Population Accessibility

Population within 45 minutes via Transit  
(Increase vs. No-Build)



Population within 60 minutes via Transit  
(Increase vs. No-Build)



- Both alternatives increase transit accessibility over the No-Build
- Alternative A has nominally higher numbers due to differences in coverage and run time.



# Ridership Analysis Review: Ridership Project Goals

---

- Implementation of BRT would provide high-quality transit connection between Silver Spring Transit Center and the Burtonsville Park and Ride
- BRT provides accessible system without reducing existing ridership
- Daily boardings in corridor would **increase** with implementation of BRT
- Transit demand needs used to develop bus service plan to optimize transit reliability
- Employment and population transit accessibility increases under both alternatives



# Ridership Analysis Review

Summary of Bus Boarding Changes for Alternatives A and B versus No-Build

Transit Ridership 2040	Total Transit			Bus Rapid Transit		
	No-Build	Alt. A	Alt. B	No-Build	Alt. A	Alt. B
Boardings	28,500	34,900	33,700	-	18,100	16,400

- Total transit ridership increases over No-Build by 6,400 (22%) for Alt. A and by 5,200 (18%) for Alt. B.
- BRT is higher by 10% for Alt. A.

# Summary

## Element Analysis Summary:

	Right-of-Way (acres)	Wetlands (acres)	Streams (linear feet)	Forested Area (acres)	Floodplain (acres)	Parks (acres)	Historic Properties (acres)	Potential BRT Ridership
Alt. A	2.0 - 4.0	0.0 - 0.2	0 - 20	1.0 - 3.0	0.0 - 0.5	0.0 - 0.2	0.0 - 0.1	18,120
Alt. B	3.0 - 6.0	0.0 - 0.2	0 - 125	2.0 - 5.0	0.0 - 1.0	0.0 - 0.2	0.0 - 0.1	16,430

# Tabletop Discussion

In an open house format, CAC members will have the opportunity to:

- Discuss the alternatives selection criteria in more detail
- Gain an understanding of the potential physical impacts associated with the alternatives.
- Gain an understanding of the how ridership is anticipated to change
- Ask the study team questions related to alternatives and ridership analyses.



# Questions?

---

## Agenda:

- ✓ **Welcome & Meeting Overview**
- ✓ **Progress Update & Upcoming Milestones**
- ✓ **Alternatives Analysis Review**
  - ✓ **Alternative A**
  - ✓ **Alternative B**
- ✓ **Ridership Analysis Review**
  - ✓ **Ridership Data Comparison**
- **Tabletop Discussion**



# Adjournment

---

**Thank you for participating!**